

REMARKS

The Office Action of July 27 and the Advisory Action of November 3, 2010, have been carefully studied. Claims 1, 3 and 9 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Claim Amendments

The subject matter of claim 8 has been incorporated into claim 1. Claims 8, 12 and 15 have been cancelled.

Art Rejections

Claims 1, 3, 8, 9, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa, JP 09-187249 in view of Aga et al., US 5,922,324 and further in view of Maruta et al., US 5,610,047.

This rejection is respectfully traversed.

The Examiner states in the Advisory Action that Hasegawa and Aga teach that it is known to powderize a functional material such as propolis along with trehalose in order to prepare a stable material with excellent storage stability, and that Maruta teaches the claimed saccharide derivatives of trehalose and teaches that such derivatives, as well as trehalose, can be used as quality improving agents and stabilizers in biologically active substances, and

specifically teaches propolis extract as a possible biologically active substance. The Examiner further states that it is clear from the disclosure of Maruta that the powdery, amorphous saccharide derivatives of trehalose are suitable for use in food products and provide similar stabilizing benefits as those of trehalose, per Hasegawa's teaching. Based upon this, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made for the claimed powdery amorphous saccharide derivatives of trehalose to have been used in the composition of Hasegawa as the trehalose component in order to prepare stable functional materials.

Applicant respectfully disagrees with the Examiner. Maruta teaches that trehalose and glycosyl trehalose have similar chemical properties, such as browning suppressing activity, due to the common trehalose structure contained in their molecules. However, Maruta does not teach that trehalose and glycosyl trehalose have similar physical properties, such as crystallinity. In fact, while trehalose easily crystallizes and is easily obtained in the form of crystals as shown in Maruta, saccharide derivatives of trehalose, as defined in claim 1, which comprises 30 w/w% or more maltosyl trehalose, will not crystallize (crystalline maltosyl trehalose has not yet been obtained). In general, it is considered that saccharides having different crystalline will have different properties in powder, and the properties of the powder will affect their properties as a powderizing base.

It should be noted that Maruta only teaches trehalose as a powderizing base (column 11, lines 61-65; Examples B-11 and B-12). Other examples of powdery compositions in Maruta are prepared by mixing ingredients that already are in powder form, and there is no showing of the use of glycosyl trehalose as a powderizing base.

There is nothing in Maruta that teaches or suggests saccharide derivatives of trehalose which comprise 30 w/w% that can be used as a powderizing base as well as trehalose. Therefore, it is respectfully submitted that it is unreasonable to assert that it would have been obvious for one skilled in the art to use said saccharide derivatives of trehalose as a powderizing base in the composition of Hagesawa.

While Hagesawa teaches emulsifying functional substances using trehalose and emulsifier and powderizing the resultant emulsion, Hagesawa does not teach using a saccharide derivative of trehalose in place of trehalose. Further, Hagesawa does not teach the use of alcohol or organic solvent in an emulsifying process. Therefore, it is respectfully submitted that a method for powderizing hydrophobic non-saccharide ingredients in a liquid or paste form using saccharide derivatives of trehalose is neither taught nor suggested by Hagesawa.

Aga discloses alcohol extracts of propolis and a composition comprising propolis along with trehalose. Aga, however, discloses only powdery compositions that are powderized using anhydrous crystalline trehalose in

Examples B-7 and B-9. There is nothing in Aga that suggests using saccharide derivatives of trehalose for powderizing propolis extract. Therefore, it is respectfully submitted that Aga does not teach or suggest powderizing a hydrophobic non-saccharide ingredient such as propolis by using a saccharide derivative of trehalose.

It is respectfully submitted that it would not have been obvious to use saccharide derivative of trehalose as defined in claim 1 to powderize a hydrophobic non-saccharide ingredient processed into a liquid or paste for by adding alcohol or an organic solvent.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,
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